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## Pluto: Basic Facts

Pluto was discovered in 1930 by astronomer Clyde Tombaugh from the United States. An astronomer is a person who studies stars and other objects in space.

Pluto was known as the smallest planet in the solar system and the ninth planet from the sun until it was reclassified by the International Astronomical Union in 2006.

Today, Pluto is called a dwarf planet. A dwarf planet orbits the sun just like other planets, but it is smaller. It is large enough for its gravity to pull it into the shape of a ball but it is too small to clear other objects and debris out of its path around the sun.

On average, Pluto is more than 3.6 billion miles (5.8 billion kilometers) away from the sun. That is about 40 times as far from the sun as Earth is. Pluto orbits the sun in an oval like a racetrack. Because of its oval orbit, Pluto is sometimes closer to the sun than at other times. At its closest point to the sun Pluto is still billions of miles away but is actually closer than Neptune.  
Pluto is only 1,400 miles (2,300 kilometers) wide. That's about half the width of the United States. Pluto's diameter is about 2/3 of Earth's moon's diameter.

Pluto orbits in a region called the Kuiper (KY-per) Belt. Thousands of small, icy objects like Pluto are in the Kuiper Belt.  
It takes Pluto 248 years to go around the sun. One day-night cycle on Pluto takes about 6 1/2 day-night cycles on Earth.

Pluto was named by an 11-year-old girl from England. This dwarf planet has five moons. Its largest moon is named Charon (KAIR-uhn). Charon is about half the size of Pluto.

Pluto has four other, much smaller, moons. They are named Nix, Hydra, Kerberos, and Styx. They were discovered in 2005, 2005, 2011, and 2012, respectively. NASA's Hubble Space Telescope took pictures of the new moons. All four are small.

They are all less than 100 miles (160 kilometers) wide.

**Why Is Pluto Not Called a Planet Anymore?**  
In 2003, an astronomer, Michael Brown, discovered a new object beyond Pluto. He had found a new planet. The object he saw appeared to be larger than Pluto. He named the object Eris (EE-ris).

Finding Eris caused other astronomers to talk about what makes a planet a "planet." There is a group of astronomers that names objects in space. This group decided that Pluto was not really a planet because of its size and the strength of its gravitational field. So Pluto and objects like it are now called dwarf planets.

Pluto is also called a plutoid. A plutoid is a dwarf planet that is farther out in space than the planet Neptune. The three known plutoids are Pluto, Eris, Haumea (HOW-may-ah) and Makemake (MAH-kay-MAH-kay). Astronomers use telescopes to discover new objects like plutoids.

Scientists are learning more about the universe and Earth's place in it. What they learn may cause them to think about how objects like planets are grouped. Scientists group objects that are like each other to better understand them. Learning more about faraway objects in the solar system is helping astronomers learn more about what it means to be a planet.

**What Is Pluto Like?**  
Pluto is very, very cold. The temperature on Pluto is 375 to 400 degrees Fahrenheit below zero. Pluto is so far away from Earth that scientists know very little about what it is like. Pictures from NASA's New Horizons spacecraft show that Pluto has mountains, valleys, plains, craters, and maybe glaciers.

Pluto has about one-fifteenth the gravity of Earth. A person who weighs 100 pounds on Earth would weigh only 7 pounds on Pluto  
.  
Most planets orbit the sun in a near-circle. The sun is in the center of the circle. But Pluto does not orbit in a circle! The orbit of Pluto is shaped like an oval. And the sun is not in the center. Pluto's orbit is also tilted.

**How Is NASA Exploring Pluto Today?**  
NASA learns about Pluto from pictures and other measurements from telescopes and from the 2015 flyby of its New Horizons spacecraft. Pictures from the Hubble Space Telescope helped scientists find the moons Nix, Hydra, Kerberos, and Styx. Hubble has also taken pictures of Pluto's surface. The pictures show dark and light areas on Pluto. Pluto is so far away that even pictures taken by telescopes in space are a little fuzzy. New Horizons has turned Hubble's fuzzy markings into mountains, plains, craters and other features on Pluto and Charon and shown the shapes and sizes of the four smaller moons.

In 2006, NASA launched the first mission to Pluto. It is called New Horizons. New Horizons is a spacecraft that has flown by Pluto, is aiming for a flyby of a small object even more distant from the sun, and then is going continue past the boundary of the solar system into interstellar space. The spacecraft is about the size of a piano. It took nine years to reach Pluto. In 2015, New Horizons arrived at Pluto. The mission spent more than five months studying Pluto and its moons. New Horizons will then study another object in the Kuiper Belt in 2019.

New Horizons has cameras that took pictures of Pluto. The spacecraft also has science tools to gather information about Pluto. These pictures and information will help scientists learn more about the dwarf planet.

**Why Is NASA Exploring Pluto?**  
NASA sends spacecraft to other planets because exploring space is exciting. It helps people learn new things. Spacecraft have visited every major planet in the solar system. Studying places like Pluto may help scientists learn how planets form.

<https://solarsystem.nasa.gov/planets/pluto/basic>

**Quick Questions and Answers About Pluto**

Q. How many kilometers from the sun is Pluto?

A. Pluto is more than 5.9 billion kilometers away from the sun.

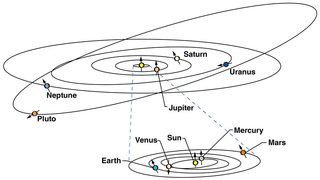
Q. How many miles from the sun is Pluto?

A. Pluto is more than 3.7 billion miles from the sun.

Q. How does Pluto orbit, or travel around, the sun?

A. Most planets orbit the sun in a near-circle. The sun is in the center of the circle. But Pluto does *not* orbit in a circle. The orbit of Pluto is shaped like an oval. And the sun is *not* in the center. Pluto's orbit is also tilted.

Q. How big is Pluto?

[](https://www.nasa.gov/sites/default/files/thumbnails/image/edu_what_is_pluto_3.png)

A drawing of the solar system shows Pluto's tilted orbit. Pluto's orbital path angles 17 degrees above the line, or plane, where the eight planets orbit.

***Credits: NASA***

A. Pluto is only 2,300 kilometers wide. That means it is 1,400 miles wide.

Q. How cold is Pluto in degrees Celsius?

A. Pluto is about 230 degrees below zero Celsius.

Q. How cold is Pluto in degrees Fahrenheit?

A. Pluto is 375 to 400 degrees below zero Fahrenheit.

Q. I weigh 30 kilograms on Earth. How much would I weigh on Pluto?

A. You would weigh about 2 kilograms on Pluto.

Q. I weigh 60 pounds on Earth. How much would I weigh on Pluto?

A. You would weigh almost 4 pounds on Pluto

https://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-pluto-k4.html